AMENDMENTS TO THE CLAIMS

1. **(Currently amended)** A biocompatible polymer composite for use in thermally-related medical therapies, the composite comprising a base polymer component and a dispersed filler component, the filler component having a thermal conductivity of less than 5 W/m-K, wherein the filler component has a metallic coating.

2. (Original) A biocompatible polymer composite as in claim 1 wherein the filler component has a thermal conductivity of less than 2 W/m-K.

3. (Original) A biocompatible polymer composite as in claim 1 wherein the filler component has a thermal conductivity of less than 0.5 W/m-K.

4. (Original) A biocompatible polymer composition as in claim 1 wherein the filler component is at least partly a glass.

5. (Original) A biocompatible polymer composition as in claim 1 wherein the filler component is at least partly a ceramic.

6. **(Canceled)**.

7. (Original) A biocompatible polymer composite as in claim 1 further comprising an electrically conductive filler component dispersed in the base polymer.

8. **(Currently amended)** A biocompatible polymer composite for use in thermally-related medical therapies, the composite comprising a base polymer component and a dispersed filler component, the filler component having a thermal conductivity of less than 5 W/m-K, ~~as in claim 1~~ further comprising a ferromagnetic filler component dispersed in the base polymer.

9. (Original) A biocompatible polymer composite as in claim 1 further comprising a chromophore filler component dispersed in the base polymer.

10. (Original) A biocompatible polymer composite as in claim 1 further comprising a light reflecting filler component dispersed in the base polymer.

11. (Original) A biocompatible polymer composite as in claim 7 wherein the composite has a resistivity ranging from 0.1 ohm/cm. to 50 ohms/cm.

12. (Original) A biocompatible polymer composite as in claim 7 wherein the composite has a resistivity ranging from 0.1 ohm/cm. to 10 ohms/cm.

13. (Original) A biocompatible polymer composite as in claim 1 wherein the composite is formed into a gel.

14. **(Currently amended)** A biocompatible polymer composite for use in thermally-related medical therapies, the composite comprising a base polymer component and a dispersed filler component, the filler component having a thermal conductivity of less than 5 W/m-K, ~~as in claim 1~~ wherein the composite is formed into a filament.

15. **(Currently amended)** A biocompatible polymer composite for use in thermally-related medical therapies, the composite comprising a base polymer component and a dispersed filler component, the filler component having a thermal conductivity of less than 5 W/m-K, ~~as in claim 1~~ wherein the composite is formed into microshells having hollow cores.

16. (Original) A biocompatible polymer composite as in claim 15 wherein the microshell cores are filled with a gas.

17. (Original) A biocompatible polymer composite as in claim 15 wherein the microshell cores are filled with CO_2.

18. (Original) A biocompatible polymer composite as in claim 15 wherein the microshell cores are filled with first and second cooperating polymerizable components.

19. (Original) A biocompatible polymer composite as in claim 15 wherein the microshell cores are filled with a drug.

20. **(Currently amended)** A biocompatible polymer composite as in claim 1 wherein the base polymer component is at least one of a polyethylene, a copolymer of at least one olefin, a polyamide, a polycarbonate, a polystyrene, a polyacrylonitrile, a polyacetal, a thermoplastic modified cellulose, a polysulfone, a thermoplastic polyester, ~~a PET,~~ a poly(ethylacrylate) or poly(methyl methacrylate), a nylon, a fluoropolymer ~~such as polyvinylidene fluoride~~, or an ethylene tetrafluoroethylene.

21. **(Currently amended)** A method of making a biocompatible polymer composite for use in thermally-related medical therapies, the method comprising the steps of:

~~(a)~~ providing a biocompatible base polymer;

~~(b)~~ providing a biocompatible dispersable filler material that has a thermal conductivity of less than about 5 W/m-K; [[and]]

~~(c)~~ mixing the filler component in the base polymer[[ic]] when in a melt state; and mixing an electrically conductive filler into the base polymer.

22. **(Canceled)**.

23. (Original) A method of making a biocompatible polymer composite as in claim 21 further comprising the step of mixing an anti-oxidation agent into the base polymer.

24. (Original) A method of making a biocompatible polymer composite as in claim 21 wherein the mixing step includes mixing the filler component in the base polymer in an inert gas atmosphere for extending the mixing time and limiting oxidation reactions of the filler component and base polymer.

25. (Original) A method of making a biocompatible polymer composite as in claim 21 wherein the mixing step includes mixing the filler component in the base polymer in a gas atmosphere that is free of oxygen.

26. (Original) A method of making a biocompatible polymer composite as in claim 21 wherein the mixing step includes mixing the filler component in the base polymer in an inert gas atmosphere that is heavier than air.

27. (Original) A method of making a biocompatible polymer composite as in claim 21 further comprising the step of applying cross-linking means to the base polymer comprising at least one of chemical cross-linking and cross-linking by irradiation.

28. **(Currently amended)** A method of making a biocompatible polymer composite as in claim [[21]] 27 wherein the cross-linking irradiation is at least one of gamma, UV and E-beam irradiation.

29-33. **(Canceled)**.

34. **(New)** The biocompatible polymer composite of Claim 20, wherein the fluoropolymer is a polyvinylidene fluoride.

35. **(New)** The biocompatible polymer composite of Claim 20, wherein the base polymer component is polyethylene terephthalate (PET).